

FHP Nicaragua Trip Summary

Recently, September 14-26, 2007, Roger D. Menard, Plant Pathologist FHP Pineville, LA, and James D. “Denny” Ward, Entomologist FHP Atlanta, GA, traveled to Managua, Nicaragua at the request of Nicaraguan Forest Department (INAFOR) for technical assistance to evaluate a disease/insect problem in their pine forest. The primary focus of the trip was concerning unknown cause of mortality in natural regeneration stands of *Pinus oocarpa* located in the Nueva Segovia district of Nicaragua. Roger and Denny’s primary agency coordination was through the Universidad Nacional Agraria (UNA) with Dr. Alberto Sediles Jaen, Entomologist for the university.



The crew with Alberto, standing, second from right, and Denny, standing, third from right.

The trip involved formal introductions to UNA director and staff, INAFOR staff, and Ministry of Natural Resources (MARENA) staff. Personnel from these departments accompanied Roger and Denny to the field to observe symptoms and collect samples for diagnosis. There were two sites of interest one with mortality in natural pine regeneration stands of *P. oocarpa* and another with planted pines of *Pinus caribbea* heavily affected by a type of gall. Dr. Alberto Sediles Jaen was also interested in assistance and training in field insect trapping techniques and field and lab methods for isolation of fungi from insects and tissues samples. The finale of the trip was concluded with a forest pathology seminar presented to UNA staff and students by Roger.



Roger giving forest pathology seminar to UNA students.

The diagnosis at this point is inconclusive for both symptomologies. The tissue samples from mortality sites were processed at Dr. Lori G. Eckhardt's lab. Dr. Eckhardt is Assistant Professor, Forest Pathology & Entomology, <http://www.sfw.s.auburn.edu/Eckhardt/Index.htm> at Auburn University, Alabama. Dr. Eckhardt's lab is currently conducting significant research into southern pine decline associated *Leptographium* species in the southeastern United States. Her lab did isolate a *Leptographium* genus from infected root samples but the species is unidentified and may be a new species. These isolates have been sent to the lab of Dr. Michael J. Wingfield's, internationally recognized expert on *Leptographium* species, Mondi Professor of Forest Pathology, <http://fabinet.up.ac.za> at the University of Pretoria, South Africa, to be described and named. According to Dr. Wingfield, it is likely that this will be not only a new *Leptographium* species but there may also be a new insect vector identified when more trapping is conducted. Also, there is a continued effort to determine the cause of the extensive galling of *P. caribbea* observed by Denny Ward and Roger Menard with USDA Forest Service, Forest Health Protection <http://www.fs.fed.us/foresthealth/>. The cooperating agencies are still working on the final determination as to the casual pathogen or insect involved with the pine symptoms observed. A follow up visit is planned and necessary to complete more insect and tissue collection data to assist in determination.



Pinus oocarpa mortali Left and P. carabea infested with galls Right

FHP is proactively investigating this insect/disease complex that has the potential of becoming an invasive pest to the US. The visit has assisted in the improvement of institutional capabilities in forest pathology for INAFOR, MARENA, and UNA in the protection of their forest resources. FHP is dedicated to cooperation that improves these agencies' ability to manage and mitigate insect and disease problems in natural resources of Nicaragua and gain valuable knowledge and expertise of native organisms that could be exported to the US.